1. Record Nr. UNINA9910815270803321

Titolo	Solid state chemistry and photocatalysis of titanium dioxide : special topic volume with invited peer reviewed papers only / / edited by Maria K. Nowotny and Janusz Nowotny
Pubbl/distr/stampa	Stafa-Zurich : , : Trans Tech, , [2009] ©2009
ISBN	3-03813-373-6
Descrizione fisica	1 online resource (340 p.)
Collana	Diffusion and defect data. Pt. B. Solid state phenomena, , 1012-0394 ; ; volume 162
Altri autori (Persone)	NowotnyMaria K NowotnyJanusz <1936->
Disciplina	628.1/66
Soggetti	Water - Purification - Photocatalysis Titanium dioxide
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Solid State Chemistry and Photocatalysis of Titanium Dioxide; Foreword; Table of Contents; Molecular Mechanism of Water Oxidation Reaction at Photo-Irradiated TiO2 and Related Metal Oxide Surfaces ; Development of Visible-Light-Driven TiO2 and SrTiO3 Photocatalysts Doped with Metal Cations for H2 or O2 Evolution ; Investigations of Photo-Excited TiO2 Based on Time Resolved Microwave Conductivity and Oxygen Isotopic Exchange; Surface Modified Titania Visible Light Photocatalyst Powders; Titanium Dioxide Photocatalyst - Unresolved Problems Tayloring the Photocatalytical Activity of Anatase TiO2 Thin Film Electrodes by Three-Dimensional Mesoporosity Surface Science Approach to Photochemistry of TiO2; Composite Titanium Dioxide Photocatalysts and the ""'Adsorb & Shuttle"" Approach: A Review ; X-Ray Photoelectron Spectroscopy of Anatase-TiO2 Coated Carbon Nanotubes ; Efficient Photoelectrochemical Splitting of Water to H2 and O2 at Nanocrystalline Carbon Modified (CM)-n-TiO2 Thin Films; Structure-Reactivity Relationships of Anatase and Rutile TiO2 Nanocrystals Measured by In Situ Vibrational Spectroscopy Sol-Gel Titania and Titania-Silica Mixed Oxides Photocatalysts An

	Overview of Semi-Conductor Photocatalysis: Modification of TiO2 Nanomaterials; Controlled Synthesis of Titanium Dioxide Nanostructures; Photocatalytical Properties of TiO2 Nanotubes; Titanium Dioxide Photocatalysts: Performance Related Properties; Keywords Index; Authors Index
Sommario/riassunto	The goal of this special volume was to provide a unique opportunity to exchange information, to present the latest results and to review relevant issues affecting contemporary diffusion research. The large number (over 232) of peer-reviewed papers emphasizes the considerable academic and industrial interest in this field. This interesting book offers much food-for-thought concerning the topic.